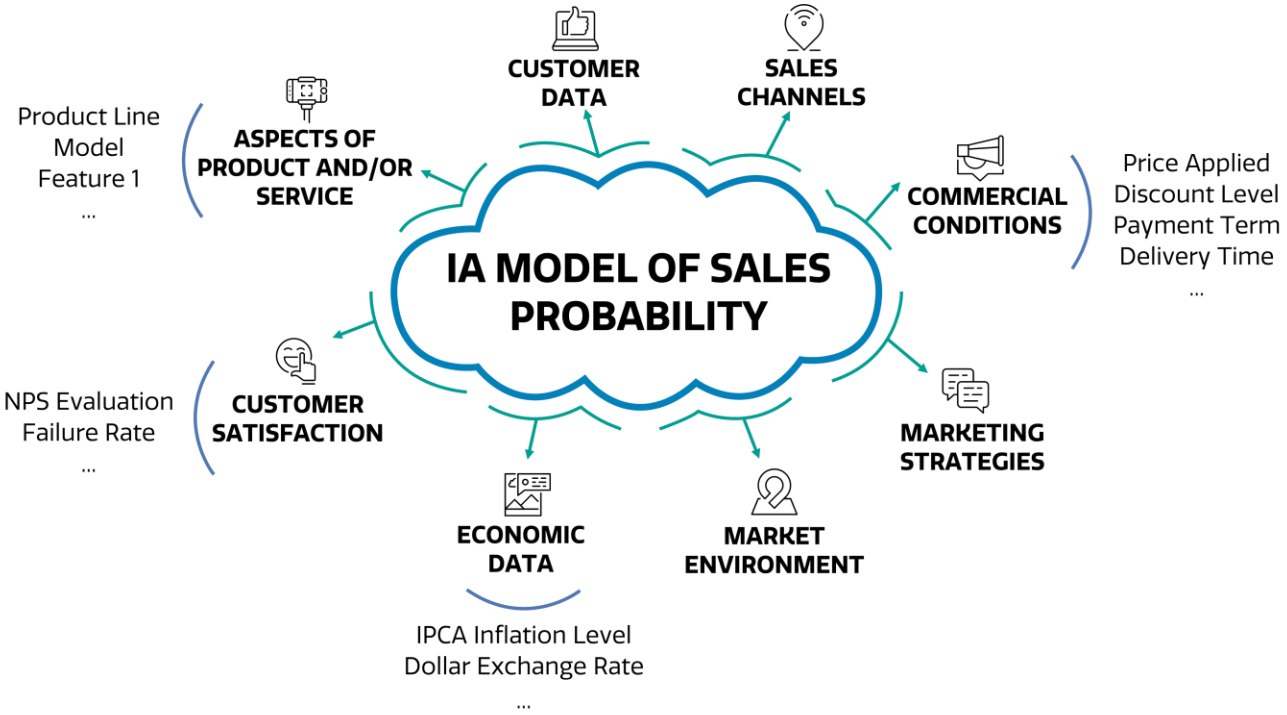
Modeling the AI of Sales Probability

We begin by defining the blocks that will be considered in the modeling.

For each block, we list the variables that will be tested for statistical significance, i.e. the level of influence on closing the deal.

Once these variables have been defined, we process the database (formatting, missing data, outliers, ...).

To demonstrate the construction of the model, let's use as a basis the example below of the 4 blocks (Product and/or Service Aspects; Commercial Conditions; Economic Data; Customer Satisfaction), broken down into 11 variables (Product Line; Model; Feature 1; Price Applied; Discount Level; Payment Term; Delivery Term; IPCA Inflation Level; Dollar Exchange Rate; NPS Evaluation; Failure Index).



While processing the data, the first insights emerged when carrying out practical analyses using the Variability Chart tool, in which it is possible to graphically evaluate correlations. Example: for a combination of NPS Rating "above 80 points", Product Line "ABC" and Delivery Time "20 days", we identify the highest rate of business closure. By understanding this simple example, you understand AI modeling, as it runs statistical tests for all these combinations, generating a mathematical model for the user to use.

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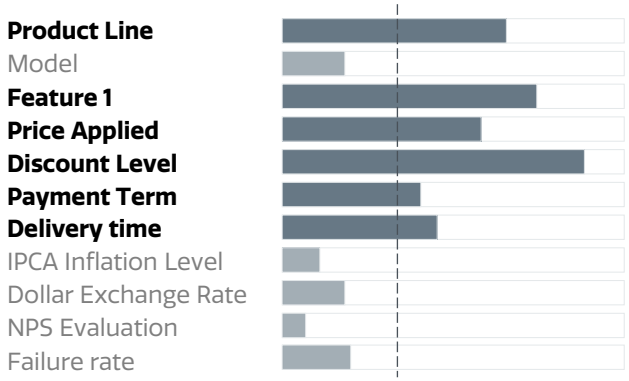
Logistic Regression Model Generation

Used to model the relationship between a binary dependent variable and a set of independent variables. In the context of our model, the dependent variable represents the probability of making a successful sale (yes or no).

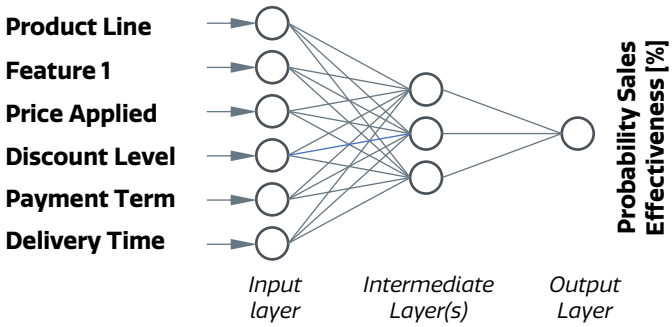
The coefficients give us an understanding of the relative weight of each variable and are compared to the p-value. Here we discard the variables that are not significant for the model, reducing complexity, both mathematically and in terms of day-to-day use with a few variables.



Neural Network Model Generation

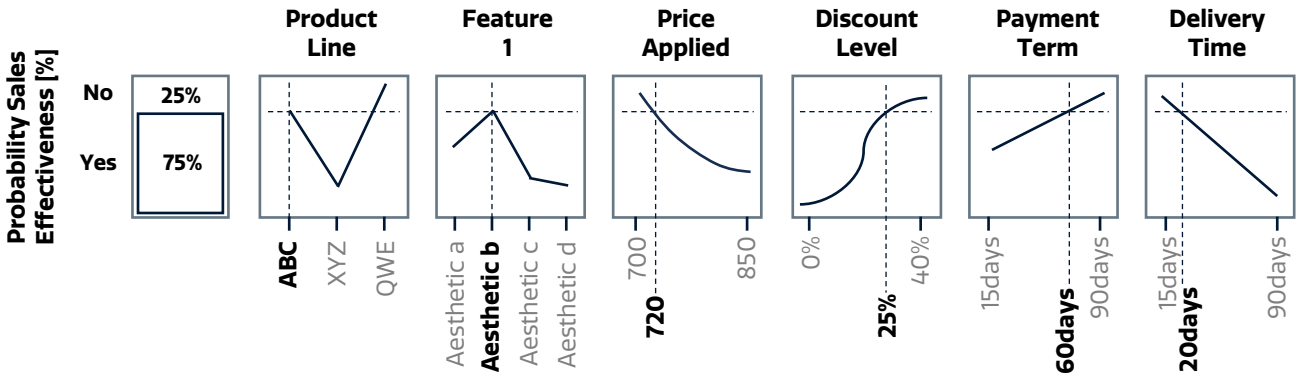
The neural network model is a good choice when you have a large database, as part of the data is used to train the model and the other part for validation. Based on the data inputs, this model generates intermediate units (neurons) allowing more complex relationships in the data (non-linear) to be modeled.

This technique is very interesting because we can generate different network simulations until we find a model with good accuracy performance (RSquare) by comparing the training model with the test model.



AI Sales Probability Simulator

Finally, this is the AI model for the user. In the example below we have the combination that generates a 75% probability of a successful sale. This becomes an excellent tool for getting away from the more obvious variables such as giving customers a discount.



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